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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,425	06/24/2003	Jerry Ditter	PALL.107C1	3308

20995 7590 09/05/2008  
KNOBBE MARTENS OLSON & BEAR LLP  
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EXAMINER
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CHEVALIER, ALICIA ANN

ART UNIT	PAPER NUMBER
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1794

NOTIFICATION DATE	DELIVERY MODE
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09/05/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com  
eOAPilot@kmob.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/603,425	<b>Applicant(s)</b> DITTER ET AL.	
	<b>Examiner</b> ALICIA CHEVALIER	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-7,10,11,13-18,21-23,25-31 and 33-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 5-7, 10, 11, 13-18, 21-23, 25-31, 33 and 34-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **RESPONSE TO AMENDMENT**

### ***Request for Continued Examination***

1. The Request for Continued Examination (RCE) under 37 CFR 1.53 (d) filed on June 13, 2008 is acceptable and a RCE has been established. An action on the RCE follows.
2. Claims 1, 3, 5-7, 10, 11, 13-18, 21-23, 25-31, 33 and 34-38 are pending in the application, claims 2, 4, 8, 9, 12, 19, 20, 24 and 32 have been.
3. Amendments to the claims, filed on June 13, 2008, have been entered in the above-identified application.

### ***REJECTIONS***

4. **The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.**

### ***Claim Rejections - 35 USC § 103***

5. Claims 1, 3, 5-7, 10, 11, 13-18, 21-23, 25-31, 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ditter et al. (U.S. Patent No. 5,846,422) in view of Karbachsch et al. (U.S. Patent No. 4,983,288) and Miller (U.S. Patent No. 4,906,371).

Regarding Applicant's claims 1 and 21, Karbachsch discloses a filter laminate (*title*) comprising any arrangement of plurality of discrete layers (*figures 4 and 5*) comprising a first membrane layer (*prefiltering membrane, col. 5, line 8*) comprising a first membrane and at least a second membrane comprising a second membrane and a bond between each of the adjacent

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layers (*final filtering membrane, col. 5, line 9*). The filter laminate is deemed to have a flow rate therethrough such that the filter is configured for separation by filtration (*abstract*). The first membrane is a microporous or ultraporous asymmetric membrane and the second membrane is porous (*col. 2, lines 44-48*).

Karbachsch fails to disclose the specific first membrane and that the laminate comprises a hot melt adhesive bonding layer.

Ditter discloses a filter comprising a first membrane layer comprising a first membrane, in a microporous membrane, the first membrane has a first surface and a second surface, each of the surfaces comprising pores, and a support region between the first surface and the second surface comprising flow channels connecting the pores of the first surface with the pores of the second surface, the first membrane comprising an asymmetric region and an isotropic region, wherein the asymmetric region comprises flow channels that gradually increase in diameter from a point in the support region to the second surface, and wherein the isotropic region comprises flow channels that are substantially constant in diameter from the point in the support region to the first surface (*col. 3, lines 26-35*). The membrane has utility in applications currently served by classic asymmetric membranes (*col. 15, lines 15-17*). Furthermore, the membrane increases separation efficiency of a laminar flow system (*col. 15, lines 3-5*).

Miller discloses a filter element having an asymmetric microporous membrane (*title, col. 9, lines 46-62*). Miller further discloses bonding the membrane to additional layers with a solventless hot melt adhesive, such that it does not have a low melt temperature that it will not adhesively function at typical heat sterilization and autoclave temperatures (*col. 12, lines 40-51*).

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It would have been obvious to one of ordinary skill in the art at the time of the invention to use Ditter's membrane in the filter of Karbachsch in order to increase separation efficiency.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use a hot melt adhesive as taught by Miller to Karbachsch in order to bond the layers together in order to provide a bonding material that will function under heat sterilization and autoclave temperatures.

Regarding Applicant's claim 3, Karbachsch fails to disclose that the second membrane is asymmetric. However it would have been obvious to one of ordinary skill in the art to use two asymmetric membranes, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. Furthermore, one of ordinary skill in the art would be motivated to have two asymmetric prefilters in order to provide better filtration and separation.

Regarding Applicant's claims 5-6, 10-11 and 35-38, Ditter discloses that the pores of the second surface have an average diameter at least about 5 or 10 times greater than an average diameter of the pores of the first surface (*col. 7, lines 17-25 and 56-60*). The average diameter of the pores of the first surface is from about 0.01  $\mu\text{m}$  to about 10.0  $\mu\text{m}$  or less than about 0.01  $\mu\text{m}$  (*col. 7, lines 17-25 and 56-60*).

Regarding Applicant's claim 7, Ditter discloses that the support structure comprises a reticular network of flow channels connecting the pores of the first surface with the pores of the second surface (*col. 3, lines 26-35*). The flow channels substantially increase gradually in diameter between the first surface and the second surface (*col. 3, lines 26-35*).

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Regarding Applicant's claim 13, Karbachsch discloses the filter laminate further comprising a third membrane layer (*figures 3 and 4*).

Regarding Applicant's claims 14 and 26, as discussed above Karbachsch does not disclose a hot melt adhesive bonding layer. However, Miller discloses these limitations as discussed above.

Regarding Applicant's claim 15, Ditter discloses that the first membrane comprises a polymer selected from the group consisting of polyvinylidene fluoride, polyarylsulfone, polyethersulfone, polyamides and cellulosic derivative (*col.10, lines 1-61*).

Regarding Applicant's claims 16-18, Karbachsch discloses that the filter further comprises a layer comprising a material selected from the group consisting of polyester, polypropylene, polyolefin, polyethylene, nylon, paper, cellulose, glass fiber, acrylic, and Mylar and/or selected from the group consisting of nonwoven fibrous material, woven fibrous material, web material, sheet material, calendared material, wet laid material, dry laid material, and extruded material (*col.4, lines 20-25*).

Regarding Applicant's claims 22 and 27, the limitation "formed from ..." is a method limitation and does not determine the patentability of the product, unless the process produces unexpected results. The method of forming the product is not germane to the issue of patentability of the product itself, unless Applicant presents evidence from which the Examiner could reasonably conclude that the claimed product differs in kind from those of the prior art. MPEP 2113. Furthermore, the shape of the hot melt adhesive before use is not important since after it is melted the original form will not be in the final product.

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Regarding Applicant's claims 23 and 25, Karbachsch discloses that the filter laminate is permeable to water (*col. 1, lines 24-33*).

Regarding Applicant's claim 28, the bubble point of the filter laminate is deemed to be greater than a bubble point of the first membrane layer and the second membrane layer in a skin-to-skin configuration without bonding.

Regarding Applicant's claims 29 and 30, Karbachsch discloses that the first membrane layer and the second membrane layer have different skin pore sizes (*figures 2 and 3*).

Regarding Applicant's claims 31 and 33, the filter laminate is deemed to have a tighter mean flow pore size than the first membrane and second membrane and third membrane layer.

Regarding Applicant's claim 34, Karbachsch discloses that the second membrane is an isotropic membrane. Miller discloses that the term "isotropic" means that the membrane has a uniform pore structure throughout the membrane. From figures 2 and 3 of Karbachsch it can be seen that the pore structures are uniform throughout the membrane.

#### ***ANSWERS TO APPLICANT'S ARGUMENTS***

6. Applicant's arguments in the response filed June 13, 2008 regarding the previous rejections of record have been considered but are moot since the rejections have been withdrawn.

#### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Chevalier whose telephone number is (571) 272-1490. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye, can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Alicia Chevalier/  
Primary Examiner, Art Unit 1794  
9/4/2008